

MINIMUM BUILDING PLAN REQUIREMENTS FOR COCONINO COUNTY

FOUR (4) PLOT PLANS are required to be submitted with all building permit applications. Incomplete plot plans will be not be accepted. A checklist will be provided at the time of building permit submittal to ensure all elements are provided and will require signature by applicant to verify all information to be true and correct. **(A THIRD copy of the floor plan will be required.)**

PLANS SHALL INCLUDE THE FOLLOWING INFORMATION.

I. PLOT PLAN – MUST BE DRAWN TO SCALE.

- A.) 1" = 20' or 1" = 30' for parcels less than one acre and 1" = 40' or 1" = 50' for parcels over 1 acre. For parcels that exceed 2 ½ acres or of irregular shape, site plan overviews at scales of 1" = 100' are required along with an inset plan of the structure(s) and on-site sewage system at one of the scales identified above.

General Property Information: Required

- A.) Property lines and dimensions and street(s) labeled
- B.) Direction of slope on property and the direction of natural drainage
- C.) Slopes that exceed 15%, including any cut banks greater than 4' in height
- D.) North arrow and site plan scale
- E.) Streams, creeks, washes and floodplains

Existing Property Improvements: Required

- A.) Location of all existing structures. Label all structures, show dimensions from structure to property lines and distances between structures
- B.) Location of all existing wells
- C.) Location of all existing drainage facilities
- D.) Location of all existing driveways
- E.) Location of all ingress and egress easements and utility easements (when applicable)

Proposed Property Improvements: Required

- A.) Location and dimensions of all proposed structures in relation to property lines and other structures
- B.) Location of all proposed wells
- C.) Location of all new and existing septic tanks and leach fields.
- D.) Location of all new driveways and road improvements and type of material
- E.) Show all utility connections and line directions:
 - 1. Leach field location
 - 2. Septic location
 - 3. Water line location
 - 4. Gas line location
 - 5. Liquid propane gas tank location or natural gas meter location

- 6. Underground L.P. tank location
- 7. Air conditioner location
- 8. Electric Meter location
- F.) Retaining wall locations. Areas to be filled (fills in excess of 4' shall be engineered).
- G.) Some subdivisions have Design Review Boards and require that the plans are approved by them before permit may be issued. A list of Home Owner Associations that require approval is maintained at the Department of Community Development.
- H.) Community Development may also require an accurate topography information when necessary.

NOTES: A survey of the lot may be required by the Building Official to verify that the structure(s) is located in accordance with approved plans. 1997 Uniform Building Code, Section 108

II. **FOUNDATION PLAN** -- Scaled 1/4" equals one (1) foot

- A.) Fully dimensioned two-line drawings -- show all foundations, footings, stem walls, piers, interior and exterior, fireplace and columns. Decks and accessory building foundations.
- B.) Wood floor -- with crawl space or basement:
 - 1. Stem wall with footing locations. Basement foundation walls.
 - 2. Piers with footing locations, including deck piers.
 - 3. Crawl space access 18" x 24" minimum, with door and foundation vents, sized and labeled. Under floor venting, 1 square foot per 150 square feet of area.

✓**NOTE:** Floor framing may be a separate drawing. Manufactured truss joist systems supply engineered floor framing plan.

- 4. Girder size and direction indicate length of span.
- 5. Load bearing members, direction, sized and labeled. Show the points of concentrated bearing from above.
- 6. Floor joist sizes, spacing and direction.
- 7. Blocking locations.
- 8. Beam pocket: 1/2" air space. Girder on pressure treated wood or steel plate and anchored. Reinforced grouted cell.
- 9. Under floor appliance location.
- 10. Framing of all exterior decks.
- 11. Wood posts on porch, basement and garage slabs shall be 1" above adjacent slab. Use stand-off post base.
- 12. 2" minimum clearance from framing to masonry fireplace and chimney.
- C.) Slab Floor: type of 4" compacted material.
 - 1. Stem wall with footing locations.
 - 2. Interior bearing wall, post and column footings.
 - 3. Plumbing drains and vent locations, second floor drain. Plumbing water line outlet locations. (Optional - for layout of under slab plumbing)
 - 4. Specify in floor heating.
 - 5. Under slab duct runs with material type and installation methods.
 - 6. Electric circuits with conduit and installation methods.

III. FLOOR PLAN -- Each floor including basements, scaled 1/4" equals one (1) foot

- A.) Fully dimensioned two-line drawings (show all walls with openings and posts, rooms, halls, stairs, etc. Label all rooms and spaces.
 - B.) Door and window locations and sizes:
 - 1. One 3068 exit door and one at any floor at grade.
 - 2. Secondary exit doors and doors into garages from house, 2868 min.
 - 3. Safety glass - human impact locations:
 - a.) Tub and shower enclosures, within 60" of the floor.
 - b.) Within 24" of doors.
 - c.) Glass greater than 9 square feet within 18" and more than 36" above floors, within 36" horizontal of walking surfaces.
 - d.) Glass within 60" horizontally of the top or bottom step of stairs.
 - 4. Natural light and ventilation -- windows to provide 1/10 the floor area for light, 1/20 for ventilation. Bathrooms - operable window 1 ½ square feet or 1/20 floor area, whatever is larger or an exhaust fan.
 - 5. Door and window schedules - optional.
 - C.) Emergency exit windows:
 - 1. One per bedroom or any room that could be used as a bedroom.
 - 2. Unfinished basements: one per area that could be turned into bedrooms with a minimum of two.
 - 3. Requirements:
 - a.) 5.7 square feet clearly openable (minimum)
 - b.) 20" wide and 24" high (minimum dimensions)
 - c.) 44" maximum sill height.
 - D.) Second floor framing plan:
 - 1. Beams and headers, indicate length of spans and size (above).
 - 2. Floor joist, size, spacing, and direction (above). Blocking.
 - 3. Bearing walls and bearing points called out.
 - 4. Framing head-outs for stairs, chimneys and mechanical.
- ✓**NOTE** Second floor framing may be a separate drawing and not included on the floor plan.
- E.) 5/8" type X gypsum board under enclosed stairs.
 - F.) 5/8" type X gypsum board separation between house and garage (walls and ceiling) with a
 - 1 3/8" solid core self-closing door and other openings protected. Ducts, piping, conduit and electric boxes shall be metal or one hour rated. Duct openings in garages shall have fire dampers. 5/8" type X on supports 16" O.C. when supporting livable space above.
 - G.) 22" x 20" minimum attic access: All separated areas with a minimum 30" head room. Fire resistive attic access through garage ceiling common with house -- 5/8" type X gypsum board glued and screwed to 3/4" plywood.
 - H.) Stairs, hallways, passageways and interior balconies: 36" minimum width. Show guardrail and handrail locations. Open sides of balconies and stairs, 30" or more above grade or floor, shall have guardrails. Stairs with four or more risers shall have one handrail. There shall be a 36" x 36" minimum floor or landing at the bottom of stairs before a deck.
 - I.) Show all exterior decks. Decking board's 1/4" maximum space.

- J.) Appliance and cabinet locations -- labeled: 1.) range or cook top and oven, range hood; 2.) dishwasher; 3.) garbage disposal; 4.) refrigerator; 5.) microwave oven; 6.) compactor; 7.) washer and dryer; 8.) kitchen and bathroom cabinets and counter tops; 9.) freezer; 10.) Built-in cabinets, desks and bookshelves.
- K.) Plumbing fixture locations: sinks, water closets, urinals, bidets, tubs, showers, spas, hose bibs, pumps, tanks, lawn and fire sprinklers, fountains, etc.
- L.) 2" x 6" plumbing walls and dryer and mechanical vent chases. Show fur-down areas for ducts, piping and other mechanical. Plumbing in garages shall be frost proofed by approved methods.

✓**NOTE:** Plumbing chases detail required for vents to roof on log or "A" frame homes.

M.) Furnace and water heater:

- 1. Show locations on plans of furnaces, wall heaters, decorative appliances, unit heaters and water heaters.
- 2. Furnaces and water heaters shall not be located in bedrooms, bathrooms, clothes closets or under stairs. Decorative, wall and unit heating appliances may be in bedrooms with combustion air from outside or other approved source.
- 3. Furnace closets shall be at least 12" wider than the furnaces.
- 4. Furnaces and water heaters located in garages shall be 18" above the floor, and barricades will be required when in vehicle path. Washers and dryers in garages, install on a platform 8" above the floor.
- 5. Furnaces access:
 - a.) furnaces in closets shall be accessed by a 2' door.
 - b.) furnaces in crawl spaces and attics shall be accessed by a 30" x 30" opening with door. (A 22" x 30" attic access may be used if the furnace is removable through that space.)
 - c.) the access shall be within 20' of the furnace.
 - d.) there shall be a switch at the access, a light at the furnace and an outlet within 25'.
 - e.) attic furnaces shall have a 30" work platform and a 24" wide access platform.
- 6. Furnaces, water heaters and dryers burning L.P. gas shall not be located in a pit or basement. Such furnaces located in an unoccupied, under floor space shall have a means for removing any unburned gas.
- 7. Show methods of supplying combustion air for gas fired furnaces and water heaters. Exception: Direct vent appliances.

✓**NOTE** Sizes of combustion air openings are required for gas appliances.

- 8. Pressure and temperature relief valve on water heaters shall be piped to the outside. Water heaters shall have an expansion tank. Water heaters in attics shall have a drain pan and line to the outside.
- 9. Appliances that produce condensation and cooling coils located in an attic shall have a drain pan and line to the outside besides the required condensation waste.

N.) Wood stoves, fireplaces, and decorative appliances:

- 1. Types of floor and wall protection labeled.

2. Clearances dimensioned. Hearth dimensioned.
 3. Gas log and log lighter identified. Damper fixed open. Listed appliances only.
 4. Appliances in bedrooms shall be provided with combustion air by approved means or be direct vent.
 5. Fireplaces in bedrooms shall have outside combustion air and doors on the fireplace front.
 6. Provide manufacture's specifications.
- O.) Range hood, dryer vent and exhaust fans shall vent to the outside. Dryers in closets shall be provided with 100 square inches of make-up air through the door or other approved means.
- P.) Smoke detector locations -- one (1) per each area:
1. All corridors or rooms giving access to sleeping rooms.
 2. In each bedroom or sleeping area.
 3. Garages, basements, workshops, and storage rooms located under habitable area.
 4. In vaulted ceilings 12" to 18" below peak or ridge beam, and when ceiling elevations differ by 24" or more.
 5. Houses more than one story or split levels, one per each level.
 6. All smoke detectors shall be wired to sound together and be equipped with battery back-up.
- Q.) Electric plan:
1. Receptacle locations:
 - a.) 6' from wall openings, 12' O.C. maximum along walls.
 - b.) Any wall space 24" or wider.
 - c.) Kitchen counter top spaces: 12" and wider, every 48" O.C., and any portion more than 24". One minimum for a peninsula or island counter top.
 - d.) Bathroom sinks location.
 - e.) Within 6' of automatic washer.
 - f.) One minimum at each location: garage, exterior, basements.
 - g.) Hallways: one for each 10' length.
 2. Switched light fixture locations: foyers, hallways, stairs (3-way), kitchens, bathrooms, attached garage, exterior doors, utility rooms, and basements. Attics and crawl spaces containing equipment or storage.
 3. Switched receptacle locations: living, dining, and family rooms, dens, studies, lofts and bedrooms.
 4. GFCI receptacles: GFCI protected in bathrooms, kitchens at all counter tops, laundry and wet bar sinks, garage, outside where grade accessible, in crawl spaces and unfinished basements. Dedicated appliances in these locations do not require GFCI protections.
 5. All bedroom receptacles shall have arc-fault protection.
 6. Size of electric service and sub-panel and their locations.
 7. Type of grounding:
 - a.) #4 uffer ground; optional ½" x 8' ground rod with #4 (pier construction or approval by Building Official only).
 - b.) #4 water bond 200 amp service, or #6 water bond 100 amp service.
 8. Electric base board heat (rough wire only minimum) required as back up for wood stove and solar systems, or use gas heating appliances.

9. Required circuits:

- a.) Two 20 amp small appliance circuits in kitchen, dining and pantry.
- b.) One 20 amp laundry circuit; separate circuit for dryer.
- c.) One 20 amp branch circuit for bathroom receptacles with no other outlets.
- d.) One circuit for each major appliance or dedicated load sized per name plate rating.
- e.) Lighting circuits: calculate 3 watts per square foot.

10. Load calculations and one line diagrams (Commercial plans and when required by Building Official).

✓**NOTE:** Electric plan may be a separate drawing and not included on the floor plan.

IV. ELEVATIONS -- Scale 1/4" equals one (1) foot (front, right and left sides, and rear views)

- A.) Four elevations minimum for SFD or Commercial
- B.) Two dimensional drawings. Outside views showing structure finished.
- C.) Door and window sizes and locations. Safety glass - human impact locations.
- D.) Type of siding or exterior wall covering. Flashing -- roof to wall.
- E.) Show planters and other building projections.
- F.) Bracing for wall sections. See County bracing requirements.
- G.) Over-hangs dimensioned.
- H.) Roof ventilation: gable end, soffit and ridge, turbine type vents. Roof venting, 1 square foot per 150 square feet. Hi/low venting, 1 square foot per 300 square feet of area.
- I.) Chimney:
 - 1. Type of construction. Flashing at roof. Saddles or Crickets.
 - 2. Height above ridge labeled.
 - 3. Spark arrestor.
 - 4. Shall be 2' above any part of the roof within 10'
- J.) Decks and porches shall be shown:
 - 1. Decks 30" or more above grade shall have guard rails 36" high with all spaces less than 4".
 - 2. Post and beam sizes shall be labeled.
 - 3. Steps to grade onto concrete pad.
 - 4. Posts on piers - 8" above grade.
 - 5. Posts on porch slabs - 6" above grade, 1" above adjacent slab.
- K.) Footings outlined: Show accurate grade line, show stepped foundation locations.
- L.) Building height dimensioned: elevations of two or more story buildings shall show an accurate grade line to determine actual heights of the building. Maximum building height is 35' according to the County Zoning Ordinance.

V. ROOF FRAMING PLAN -- 1/4" equals one (1) foot.

Check snow loads for your location: 40#, 30# or 20# per square foot.

- A.) Load bearing beams. Door and window headers. Size and indicate length of span.
- B.) Garage headers. Size and span.

- C.) Post locations and supporting beams.
- D.) Rafter sizes, direction and spacing. Ceiling joists.
- E.) Truss direction and spacing (engineered). Provide engineered truss specification details.
- F.) Ridge, valleys and hips sizes and labeled.
- G.) Blocking and bracing locations.
- H.) Show all covered deck roof framing.

VI. CROSS SECTION -- 1/4" equals one (1) foot or larger

- A.) Make visible all construction elements.
- B.) Call out all rough construction elements: Anchor bolts, 1/2" x 10" at 4' O.C. and within 12" ends of plates into a reinforced cell.
 - 1. Footing and stem.
 - 2. Girders and joists -- size and spacing, blocking; or slab with fill.
 - 3. Studs -- size and spacing.
 - 4. Floor and roof sheathing. Type and size.
 - a.) rated flooring, to be tongue and groove. 5/8" on members 16" O.C., 3/4" on members 24" O.C.
 - b.) 5/8" roof sheathing for tile roofs with a panel rating of 40/20 minimum.
 - c.) 1/2" rated roof sheathing on slopes 5:12 and less, use ply clips when members are spaced 24" O.C. All roof sheathing shall have a minimum panel rating of 32/16.
 - 5. Rafters -- size and spacing. Engineered trusses - type and spacing.
- ✓**NOTE:** Engineered truss details may be required.
- 6. Roof blocking -- each space at bearing. Hurricane ties, wall to roof member at 4' O.C.
- 7. Girders ridge and beams.
- 8. Insulation (first floor, walls and roof/ceiling).
- 9. Anchor straps for houses when horizontal siding, stucco and brick veneer is used, installed at 4' O.C. from sill plate to wall and from wall to floor to wall.
- 10. Brace exterior and main interior walls and trusses at ends and 25' O.C.
- C.) Call out all finish elements:
 - 1. Drywall or interior wall and ceiling finishes.
 - 2. Moisture barrier -- approved panel siding or sheathing, 15# felt, approved thermal wrap, or thermal barrier panels.
 - 3. Exterior siding approved on stud spacing. Stucco or brick veneer.
 - 4. Base board.
 - 5. Finish floor.
 - 6. Floor covering.
- D.) Dimensions:
 - 1. Ceiling heights.
 - 2. Door and window heights.
 - 3. Maximum sill height for emergency exit windows.
 - 4. Under floor clearance.

5. Minimum wood to earth separations.
6. Footing depth below grade.

- E.) Roof over-hang and attic space:
1. Fascia size and material. Drip edge required.
 2. Over-hangs shown and dimensioned.
 3. Soffit: blocks or exterior plywood.
 4. Anchor straps (wall to roof member), at 4' O.C.
 5. Roof ventilation. Method for soffit venting.
 6. Sever climate -- in all areas of Coconino County (except Page, Tuba City, Winslow, Ash Fork) roof eaves shall be protected as follows: asphalt shingles – #40 coated roofing, with laps cemented together, installed on the eave and beyond the interior wall line 12". Wood shingles and shakes - two additional layers of 15# felt applied shingle fashion, solidly cemented together, installed on the eave and beyond the interior wall line 36".
- F.) Stair information and/or detail:
1. Dimension unit rise (8" maximum), unit tread (9" minimum) and head room (6'8" minimum).
 2. Show handrail or guardrail. Handrail required 4 or more risers. Handrails and guardrails on stairs shall be installed between 34" to 38" above the nose of the tread.

✓**NOTE:** This information may be labeled on the floor plan.

VII. DETAILS -- Scale ½" equals one (1) foot or larger

- A.) Footing Materials, sizes, rebar, (horizontal and vertical) depth below grade, sill plates, anchor bolts, connectors
- B.) Stem wall and straps (see County Details)
- C.) Piers
- D.) Masonry walls and columns, slab to stem wall. Basement foundation.
- E.) Special details: ridge, over-hang, plate connections, beam to joist.
- F.) Retaining wall: engineer may be required.
- G.) Masonry fireplace -- plan and section: footing, block, rebar, lintel, fire box, hearth, and chimney. Show 2" clearance to combustibles.
- H.) Specifications: designer or architect's remarks (not necessarily required).
- I.) Engineer required: masonry fireplaces and chimneys supporting beams or ledgers. Masonry columns in excess of 12'. Retaining walls in excess of 8'. Alternate construction methods. Soil fills supporting structures. Basement foundation walls in excess of 10'.

VIII. REVISIONS -- Changes in approved plans shall be submitted by means of new drawings or addendum letters **PRIOR** to the start of that particular work.

IX. PREVIOUSLY SUBMITTED PLANS

When a plan is approved by our department, future plans for the same house shall have all corrections made when submitted. Also, contractors and individuals who obtain permits at consistent intervals and know our Building Department policies should make their best effort to have all information we request

on their plans.

X. List of Home Owner Approvals that are required and shall meet the following standards.

- A.) A letter of approval from the Home Owner Association.
- B.) All pages of both sets of plans shall be stamped with an original stamp as approved by the Home Owner Association. No copies of approved stamps will be accepted.

This shall be done before plans may be submitted to the Coconino County Building Division for plan review. Any set of plans for which Home Owner Association approval is required will not be accepted by the Building Division for plan review without these new standardized requirements.

- A. STARLIGHT PINES
- B.) PINE CANYON
- C.) GREENEHAVEN
- D.) INDIAN GARDENS
- E.) BLUE RIDGE ESTATES
- F.) TAMARRON PINES
- G.) FLAGSTAFF RANCHES GOLF CLUB AND ASPEN
- H.) SLAYTON RANCH ESTATES
- I.) MOGOLLON RANCH
- J.) FOREST HIGHLANDS
- K.) RED LAKES ESTATES UNIT #2:
- L.) STARLIGHT PINES RANCHETTES:
- M.) SUNSET VISTA

**Coconino County Community Development
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